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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,760	12/03/2003	Thomas Koerner	DKT02164	4211
7590	06/07/2006		EXAMINER	
Borg Warner Inc. Patent Adminstrator 3850 Hamlin Road Auburn Hills, MI 48326-2872			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
				3748

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/726,760	KOERNER, THOMAS	
	Examiner	Art Unit	
	Thai-Ba Trieu	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-12 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3,6-10 and 15-18 is/are rejected.
- 7) Claim(s) 4,5,11 and 12 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

This Office Action is in response to the Amendment filed on April 20, 2006.

Claim 1 was amended; and claim 2 was cancelled.

Claim 14 depends on claim 13 and claim 13 depends on the cancelled claim 2, thus claims 13 and 14 have not been examined on their merits.

Claim Objections

Claim 1 is objected to because of the following informalities:

- In claim 1, line 4, “**a**” before “**exhaust manifold piece (4)**” should be replaced by – **an** – (*for correcting grammatical error*).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 and its dependent claims 3-12 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claim 1, line 5, “**an exhaust manifold**” is a double recitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthur et al. (Patent Number 4,689,952), in view of Birmann (Patent Number 3,068,638), and further in view of the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1) and Chen et al. (Pub Number US 2004/0142152 A1).

Arthur discloses a turbocharger and exhaust manifold system comprising:

a turbine housing (Not shown) defining a rotor space for receiving and accommodating a turbine rotor (Not shown) (See Column 4, lines 58-61, Column 5, lines 65-68, Column 6, lines 1-6), and

an exhaust manifold (18) having an exhaust gas manifold piece (18) that includes a branch pipe (72, 76, 78) connecting said turbine housing (not shown) to at least one piece (18) of an exhaust gas manifold of a combustion motor (Not shown) (See Figures 1-3 and 5);

wherein the exhaust gas manifold pieces (18) are thermal connection with said turbine housing (Not shown) (See Figures 1-3).

However, Arthur fails to disclose a portion of the branch pipe extending into at least a portion of the turbine housing; the turbine housing and at least the branch pipe for the connection with the exhaust gas manifold piece being made of sheet metal, and the thickness of the inner and outer layers; the inner of the sheet metal layers being attached to the branch pipe by a sliding connection, whereas the respective outermost

sheet metal layer is formed of a first spiral housing part and a second half part; and two mutually complementary spiral portions being connected to each other by welding.

Birmann teaches that it is conventional in the turbocharged internal combustion engine art, to utilize a portion of the branch pipe (114) extending into at least a portion of the turbine housing (18') (See Figure 7, and Column 6, lines 43-59).

Manfred teaches that it is conventional in the turbocharger art, to utilize the turbine housing (22, 23, 62, 63) and at least the branch pipe for the connection with the exhaust gas manifold piece being made of sheet metal, said housing (22, 23, 62, 63) consisting at least two layers of metal sheet arranged one outside of the other, wherein the outer one (60, 62, 63) is thicker than the inner one (22, 23) (See attached Figure 5); the inner of the sheet metal layers being attached to the branch pipe by a sliding connection, whereas the respective outermost sheet metal layer is formed of a first spiral housing part and a second half part; and two mutually complementary spiral portions being connected to each other by welding (See Figures 5 and 11, Column 2, lines 34-39).

Additionally, Chen teaches that it is conventional in the heat shield art for offering the thermal insulation and reduced noise for vehicle, to utilize the manifold piece and an exhaust gas elbow pipe being made of sheet metal (See Figures 1-3, and Paragraph [0024]).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a portion of the branch pipe extending into at least a portion of the turbine housing, as taught by Birmann; the thickness of the inner and

outer layers, the inner of the sheet metal layers being attached to the branch pipe by a sliding connection, whereas the respective outermost sheet metal layer is formed of a first spiral housing part and a second half part; and two mutually complementary spiral portions being connected to each other by welding, as taught by Manfred; and sheet metal, as taught by Chen, to improve the efficiency and the longevity of the Arthur device.

Claims 3, 7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthur et al. (Patent Number 4,689,952), Birmann (Patent Number 3,068,638), the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1) and Chen et al. (Pub Number US 2004/0142152 A1); and further in view in view of Stratton et al. (Patent Number 4,192,122).

The modified Arthur device discloses the invention as recited above; however, fails to disclose at least partially realized by a sliding connection, and the distance between the two layers of metal sheet being 1mm, and in the range from 2 to 5 mm.

Stratton teaches that it is conventional in the insulated exhaust manifold art, to utilize at least partially realized by a sliding connection (See Figures 1-3, Column 2, lines 56-68, and Column 3, lines 1-6); and the insulation member having the thickness of 1mm to 5mm fitted to the distance between the two layers of the metal sheet (See Figure 1, Column 4, lines 14-18).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized at least partially realized by a sliding connection, and the distance between the two layers of metal sheet being 1mm, 8 mm, and in the range from 2 to 5 mm, as taught by Stratton, to improve the protective structures and efficiency, in the modified Arthur device.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthur et al. (Patent Number 4,689,952), Birmann (Patent Number 3,068,638), the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1) and Chen et al. (Pub Number US 2004/0142152 A1), and further in view of Kohl et al. (Patent Number DE 33 34 413 A1).

The modified Arthur device discloses the invention as recited above; however, fails to disclose an insulation layer being made of textile tissue, a woven or knitted tissue.

Kohl teaches that it is conventional in the exhaust manifold art of the internal combustion engine, to utilize an insulation layer being made of textile tissue, a woven or knitted tissue (See Figure, and Abstract).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized an insulation layer being made of textile tissue, a woven or knitted tissue, as taught by Kohl, to improve the performance efficiency of the modified Arthur device.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arthur et al. (Patent Number 4,689,952), Birmann (Patent Number 3,068,638), the admitted prior art of Manfred et al. (Patent Number DE 100 22 052 A1), Chen et al. (Pub Number US 2004/0142152 A1), and Stratton et al. (Patent Number 4,182,122), and further in view of Kohl et al. (Patent Number DE 33 34 413 A1).

The modified Arthur discloses the invention as recited above; however, fails to disclose an insulation layer being made of textile tissue, a woven or knitted tissue.

Kohl teaches that it is conventional in the exhaust manifold art of the internal combustion engine, to utilize an insulation layer being made of textile tissue, a woven or knitted tissue (See Figure, and Abstract).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized an insulation layer being made of textile tissue, a woven or knitted tissue, as taught by Kohl, to improve the performance efficiency of the modified Arthur device.

Allowable Subject Matter

Claims 19-20 are allowed.

Claims 4, 5, and 11-12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-12, and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bien et al. (Pub. Number US 2005/0183414 A1) disclose exhaust manifold.
- Bjornsson, SR. (Pub. Number US 2005/0126163 A1) discloses a turbocharger.
- Curtil (US Patent Number 4,288,988) discloses a method and an apparatus for improving the gas flow in an internal combustion engine exhaust manifold.

- Friedrichs (Pub. Number DE 37 21 608 A1) discloses an exhaust manifold.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TTB
May 30,2006

Thai-Ba Trieu
Primary Examiner
Art Unit 3748